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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,553

04/03/2006

Hidekuni Murakami

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2069

26646 7590 10/02/2009
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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

10/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,553	Applicant(s) MURAKAMI, HIDEKUNI	
	Examiner Deborah Yee	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 11-16 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-16 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/18/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 18, 2009 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 to 7, 11 to 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 09-241793 (hereafter "JP-793") which was cited in the previous office action dated April 16, 2009.

4. Claims 1 to 7 and 11 to 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 09-209039 (hereafter "JP-039") which was cited in the previous office action dated April 16, 2009.

5. The English abstract and claims of JP-793 and JP-039 each disclose a steel sheet alloy composition having constituents whose wt% ranges overlap those recited by the claim; and such overlap establishes a prima facie case of obviousness since it

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would be obvious for one skilled in the art to select the claimed alloy wt% ranges over the broader disclosure of the prior art since the prior art teaches similar properties such as high strength and Cu precipitation.

6. In addition, prior art steel sheet is processed in substantially the same manner as Applicant to obtain Cu precipitation. The English abstract of JP-039 teaches heating and holding steel at 400 to 650°C for 0.5 to 10 minutes and paragraph [0024] of JP-793 teach heating and hold steel at 480 to 600°C for 10 -120 minutes, which are within present invention process range of heating and holding at 300 to 650°C for 5 seconds or more.

7. A finely dispersed Cu metal phase precipitate at $\leq 0.1\mu\text{m}$, Cu density $\geq 20\mu\text{m}^2$, steel structure having an average grain size of 30-300 μm , a hardness increased by 1.1 fold or more after heat treatment, Nb carbide or nitride, and a tensile strength increase of $\geq 30\text{ MPa}$ as recited by one or more of the claims are not taught by JP-793 or JP-039 but such properties would be expected since composition and heat treatment are closely met and in absence of proof to the contrary.

8. The recitation Bi, Mo, W, Sn, Sb, Mg, Ca, Ce, La and Co in a total of 0.5 % or less in claim 3 is not taught by prior art but such difference would not be a patentable merit because elemental range has a lower limit of zero and therefore optional and need not be present. Also last paragraph on page 13 of Applicant's specification teaches elements present as minor unavoidable impurity found in ore or scrap; and therefore such elements would also be expected in prior art steel at an impurity level.

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9. Claim 21 recites a lower Si limit of 3.1 which is slightly higher than the upper Si limit of 3% in JP-793. Since Applicant has not demonstrated criticality of the claimed Si range (e.g. by comparative test data), the a composition with 3.1% Si verses a composition with slightly less Si at 3% would depict a mere difference in the proportion of element without any attendant unexpected results which would not patentably distinguish claims over prior art.

10. For the foregoing reasons, claims would not patentably distinguish over prior art.

Information Disclosure Statement

11. The information disclosure statement filed September 18,2009 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of relevance of Japanese Office action dated July 29, 2009, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information. It has been placed in the application file, but the information referred to therein has not been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/
Primary Examiner
Art Unit 1793

/DY/